

Amendments to main claims.

Claims 1, 20, 44 and 50 have been amended to require the following features:

- the first and second substrates are different
- the catalyst is applied with a carrier containing water
- bonding occurs at normal ambient temperature without an external energy source

Rejections

In Paragraph 5 of the Office Action the Examiner rejected originally filed claims 1-5, 7-11, 13-18, 20-43, 49, 95 and 97 under 35 U.S.C. §103(a) as being unpatentable over Grubbs et al, and/or the admitted state of the prior art taken in view of Mühlebach et al. (US 5,973,085) or WO 97/38036, and further in view of Lesser (US 2,978,354), Cole et al (US 3,485,655) or Kreible (US 2,901,099) and EP 424,833. Applicants traverse the rejection.

1. The Grubbs et al teach metathesis ingredients that happen to be used in the claimed invention, and there is no issue with the fact such individual materials are known. Citation of Grubbs et al is duplicative of the information provided by the specification.
2. Mühlebach et al do not describe metathesis reactions under normal ambient conditions. To the contrary, Mühlebach et al describe compositions of catalyst and monomer premixed which are storage-stable in the dark. Column 49, lines 45-46. These compositions do not react until either heat or radiation is applied. This is far afield of the claimed invention.

3. Ofstead and Ep '833 describe bulk or solution RIM polymerization, resulting in a molded product, which bears no relevance to the bonding of substrates as recited in the claims. A RIM glass fiber reinforced composite encasing fibers in a molded matrix is rather far afield from the subject matter of the claims in which
 - There are 2 different substrates,
 - the catalyst is applied with a carrier containing water
 - the 2 substrates end up being adhesive bonded together (one or both not encased in a matrix), and
 - bonding occurs at normal ambient temperature without an external energy source.
4. Lesser, Cole and Krieble are non-analogous art because they deal with chemistry foreign to the present invention. No generalization concerning unrelated catalytic processes can be properly made. These references furthermore are nonenabling for the subject matter claimed. Persons with ordinary skill in the art would not draw any conclusions or expectations given catalysis and reactions foreign to the present invention. Under the standards of 35 UCS 103, relying upon such references would amount to hindsight reconstruction, ignoring basic elements required under § 103 which can not be made out.

The conclusion by the Office made in paragraph 5, 3rd subparagraph, page 3, that skilled persons would have readily appreciated a variety of applications, stated no basis in respect of the claimed invention in the applied art because upon review of each citation by Applicants, they find no relation, conception, or teaching which could be suggestive to one of ordinary invention that the claimed invention is possible. As a preliminary matter, nothing alleged by the Office or shown by the prior art that bond strength is obtainable between two different substrates under the claimed conditions.

The rejection has asserted that the skilled person would generally expect that

a metathesis reaction would be initiated. (line 14, Page 4). That may be true, but mere initiation of a reaction does not establish obviousness of the claimed invention.

The invention evidences a surprising result that two different substrates will be bonded by the method conditions. The evidence provided is well beyond the mere initiation of a polymerization reaction. The Examples provided in the specification show very many different substrates bond with significant bond strength. This performance under the conditions recited is surprising and unexpected.

Prima facie obviousness requires a showing to meet three basic criteria.

First, there must be some suggestion or motivation, in respect of each and every limitation claimed, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. If a modification must be made to the prior art, the Office must find a basis in the art to make such a modification.

Second, the prior art reference must teach or suggest all the claim limitations. MPEP § 2143.

Thirdly, there must be shown some objective basis to form a reasonable expectation of success. The Office's conclusion on this issue is not a substitute for prior art. Such statements by the Office are not prior art.

Thus, to support a conclusion of obviousness, a basis in the prior art must be found and shown to be suggestive not only of the desirability of making the claimed invention, i.e., provide a teaching or suggestion to one of ordinary skill in the art to expect that the changes would produce a workable embodiment like the claimed subject matter. *Ryco Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir.1991). These requirements have not been met.

Rejection per parag. 6 of th Office Action

In Paragraph 6 of the Office Action the Examiner rejected claims 1-3, 7-11, 13-18, 29-40, 43, 49, 95 and 97 under 35 U.S.C. §103(a) as being unpatentable over Suzuki et al (US 5,137,785) in view of Lesser (US 2,978,354), Cole et al. (US 3,485,655) or Krieble (US 2,901,099) and EP 424,833. Applicants respectfully traverse the rejection.

1. Suzuki, et al is not properly combinable with Lesser Cole and Kreible because the chemistry is entirely unrelated. Catalysis is an unpredictable art. No actual generalizations hold to provide any reasonable basis for predicting any results.

2. Suzuki et al. describes a composite material composed of a substrate and a surface layer wherein the substrate is a preformed ring-opened polymer of a norbornene-type monomer having tricyclic or higher cyclic structure and the surface layer is a polymer sheet of an olefin polymer or a thermoplastic hydrocarbon elastomer. The polymer sheet tenaciously adheres to the substrate without any extraneous adhesive or means to a degree that tearing takes place in the substrate when an attempt is made to separate the polymer sheet from the substrate. Column 2, lines 9-18.

3. A claim is obvious if the prior art provides first, identification of each and every element or its equivalent claimed and teaches, or is suggestive, that all of these elements be combined in the manner as claimed, along with some basis outside bald assertions by the Office, evidencing that one having ordinary skill has a reasonable expectation that this assemblage of elements combined by the steps of the method, will work.

4. The rejection from paragraph 6 must fall because:

Suzuki et al. does not contain each and every feature of the invention as defined in the rejected claims. For example, the result described by Suzuki et al. is a composite material wherein a substrate and plastic layer have good adhesion in the absence of any adhesive. In addition, the composite is made by placing the elastomer layer in a mold and then reaction injecting norbornene monomer and metathesis catalyst in the mold to bulk polymerize the monomer. The claims recite a method for bonding two different substrates together. The method entails providing a catalyst in a carrier containing water on a first substrate surface and contacting it with a metathesizable material. A bonding takes place under normal ambient conditions without the addition of an external energy source to bond the first substrate surface to the second substrate surface.

The claimed method results in an adhesive material between the different first and second substrate surfaces, with an adhesive layer interposed. Thus, the claims are not rendered obvious where none of these features are taught or suggested from Suzuki et al.

According to the Office Action, Suzuki discloses a composite including a metathesis polymer that may be located between upper and lower substrates and that in such a case the metathesis polymer forms an adhesive interposed between the substrates. However, a careful reading of the section of Suzuki et al. referred to by the Examiner reveals that the norbornene monomer and metathesis catalyst is reaction injected into a mold to bulk polymerize the monomer even in this example. Bulk polymerization results in a molded article. See, page 7, lines 1-15.

Since Suzuki et al. does not disclose each and every feature of the claims, it does not anticipate the invention as defined by the rejected claims. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Applicants submit that the claims have been shown to be patentably distinguishable over the art. Allowance is respectfully requested.

Respectfully submitted,

Miles B. Dearth

Miles B. Dearth
Attorney for Applicant
Reg. No. 35,115
919-468-5979 ext. 6204
Lord Corporation
111 Lord Drive
Cary, North Carolina 27502

CERTIFICATE OF MAILING (37 CFR 1.8(a))

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Date Jan. 16, 2004

Miles B. Dearth

Miles B. Dearth